

Evaluation of University Students' Views on the Gamified Classroom Model

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Abstract—With this study, it is aimed to determine the opinions of university students about the gamified classroom model. In this context, gamification activities were used in the classroom process of the gamified classroom model. The study group of the research consisted of 62 university education faculty students who are continuing their education in voluntary universities. The research was carried out in the 2021–2022 fall academic year. In the study, university students were trained in a gamified classroom environment for 4 weeks in order to determine their views on the gamified classroom environment. In the research, semi-structured interview questions developed by the researcher were used to collect data. The questions used in the research were collected by university students with voice recorders. The analysis of the data was interpreted in detail with content analysis. As a result of the research, it has been seen that university students have a positive effect on both their motivation and their lessons with gamified education. Kahoot has been the most preferred application among gamified educational environments. It is concluded that gamification trainings increase students' interest in the lesson, their success and cooperation.

Keywords—gamified education, distance education, distance education management, university students

1 Introduction

The concept of information–communication has brought about innovations in many fields with the developing technologies [15] [22], and one of these areas is the field of education. With the developments in educational technologies, the concept of education technology has become a whole [30][50]. In order to keep up with the needs of the developing and constantly renewed diameter, technology has entered the field of education and training, and one of the fields that has entered digital transformation has

been higher education [1]. At the beginning of the concepts that make digital transformation indispensable are the characteristics of the new generation of students whose expectations, wishes and needs have changed with the effect of rapidly developing technology [2] [9].

The generations we call digital natives, who are intertwined with the technologies of the information age, such as computers, mobile phones, smart homes, smart watches and tablets, live together with these technological products [3] [4]. With the inclusion of technology in life so much, the importance of using technological tools in the education of digital native concepts is indisputable [25]. It is noteworthy that technology is not used enough in terms of adaptation to lessons, in terms of both information and time, and due to the inadequacy of classroom sizes [5] [6] In this respect, in the case of teaching an audience interested in technology in a structured traditional education system that is far from natural learning processes, it is often possible for these students to lose their motivation and get lost in the system [18] [12] [4] [9].

It is stated that people, whom we call the new generation digital natives, have features such as accessing information quickly, and desire to learn by researching and making discoveries and preferring game-based learning when they want to access the information they want [4][5] [35]. When these features are examined, one of the digital ways that includes motivating, encouraging and exploratory game design features in order to provide effective, attractive and fun learning environments in the education system is gamification [10] [11]. If we think that everything that people do for fun to pass time can be called a game, the concept of game play is a very old concept [8]. The concept of the game industry is a rapidly developing field with the influence of individuals who are called digital natives of developing mobile hardware tools. It is known that [7] [11].

Today, games are a new tool for everyone [16]. Jesse Schell stated in his opinion as a game designer that many things we use in our daily life will be gamified in the future. Gamification has settled in every field and has taken its place in the field of education as well. Gamification can be used in education, in the field of learning and awareness, to increase the efficiency and effectiveness of the learning–teaching process [16] [13] [14] [17].

Zichermann and Cunningham [19] define gamification as ‘thinking and playing games. Kapp [14] states that gamification supports aesthetics and game mechanics, personality motivation, emotions and commitment. Deterding, Dixon, Khaled and Nacke [31] define gamification as ‘the use of game design in non-game content’. The common point of the definitions is that they are applications that require the use of game design elements in order to provide motivation, success, continuity and participation [31] [21] [19].

There are also various discussions about the widespread use of gamification due to its positive effect on students’ learning skills [23]. In several studies, gamification may not be sufficient to maintain classroom participation. Burke [24] pointed out that the different elements of gamification produce different results. In addition, the effects of gamification and gamified distance education systems lead to different results, depending on the purpose [26] [51]. Some students do not like games and do not give up their

learning habits or situations, such as unwillingness to complete a review of the method of application [37][28].

Gamification is a process that aims to increase extrinsic and intrinsic motivation and involves people in a task through recreational activities [29]. They are tools that enable people to participate effectively in cooperation with each other while developing gamification strategies. Content is very important when preparing gamification processes [29][27].

There are many example applications of gamified educational environments, like Kahoot, 'ClassDojo', 'Classcraft', 'Socrative' and so on.

Kahoot. Kahoot application from gamification applications is a free online test tool that creates multiple choice questions in the form of a survey, discussion or quiz in a game mood, increasing interest, motivation and class participation [33].

ClassDojo. It is a communication platform that allows students to share what they have learned in the classroom through pictures, videos and messages at home [34].

Socrative. Teachers can create quizzes for Socrative at <https://socrative.com/> and have students solve them with their smartphones or tablets. A teacher can give immediate feedback on the lesson with the Socrative programme. After processing the subjects, it is ensured that the subject is evaluated in a fun way with the help of games. This programme helps teachers to follow the development of students and to ensure the permanence of the subject [36].

Due to the importance of using the above-mentioned gamification elements in the educational environment, it is thought that traditional teaching will keep up with the times and make teaching fun and quality [31] [32]. It can be seen that gamification can be used as a potential in order to increase the motivation of unsuccessful students in the education process by increasing their interest in the lesson and to ensure their participation in the lesson [23]. There are many gamification applications. In this study, 'Kahoot', 'ClassDojo', 'Classcraft' and 'Socrative' applications were selected from the gamification applications.

1.1 Purpose of the research

The answers to the following questions were sought in order to determine the opinions of the students studying in the education faculty of the university about gamified environments:

1. Which of the applied gamification programmes is the most effective?
2. What do you think are the advantages of gamified environments?
3. What do you think are the disadvantages of gamified environments?
4. What are your views on the use of gamified environments in training?

2 Method

In this study, the case study design, which is one of the qualitative research approaches, was adopted to determine the views of university students on gamified virtual classroom applications. The case study is an exploratory research method. It is used in

real life to examine the situation in a real environment [37] [43]. For this purpose, the single-case holistic design, which is one of the case study designs, has been adopted to test a theory or concept, investigate a unique case or explore questions that have not been researched or have not been adequately researched before [38].

2.1 Working group

In order to determine the views of the education faculty students on the gamification process, 62 students studying at the education faculty of the university in the 2017–2018 academic fall semester participated. 'Kahoot', 'ClassDojo', 'Classcraft' and 'Socrative' applications were taught to teacher candidates within a period of 4 weeks and students' opinions were sought.

2.2 Data collection

In this study, semi-structured interview questions were prepared to collect data. Questions were prepared by the researcher and the questions were finalised by four experts in their fields. The findings obtained from the research were confirmed by the students. In this way, the accuracy of the obtained data was determined.

2.3 Analysis of data

The content analysis method was used in the analysis of the data obtained from the education faculty students studying at the university. In content analysis, data are gathered around similar concepts and themes and are interpreted in a way that the reader can understand (Creswell, 2014). In the content analysis in this research, first of all, coding for the raw data was obtained from the interviews, followed by collecting and interpreting the coded data under themes.

3 Findings

3.1 Which of the applied gamification programmes is the most effective?

A gamification class application was given to 62 students studying in the education faculty of the university institution. Four different gamification programmes were used. It was found that students preferred Kahoot, the most among these gamification programmes. There were 30 students who preferred the Kahoot application, 12 students who chose the ClassDojo application, and 10 students who chose the Socrative and Classcraft applications each.

The opinions of some of the university students are as follows:

'The most fun and effective is the Kahoot application. It increased my motivation, I attended the course more enthusiastically. Other applications are good applications, but I choose Kahoot among them.'

'I think Kahoot is more suitable for us as an age group. Or I may have thought so because it is the programme I have heard the most'.

Table 1. Which of the applied gamification programmes is the most effective

Theme	F
Kahoot	30
ClassDojo	12
Socrative	10
Classcraft	10

3.2 What do you think are the advantages of gamified environments?

Considering the findings of university students about the importance of gamification, it was found that gamification is effective because it increases the interest in the lesson. Likewise, gamification practices enable each individual to learn, as they provide the opportunity to offer different teaching techniques. Another important aspect of gamification is that it provides permanent learning. The feature of providing instant feedback also contributes to the learning of people. From the findings of the students regarding the advantages of gamification, we can say that they think that it has many advantages.

Some of the students' views on the importance of gamification in education are as follows:

'The importance of gamification causes us to exhibit positive attitudes towards the lesson. What I learned through gamification was very enjoyable, I had the opportunity to reinforce the topics taught by the teacher. In this case, it increases my interest in the lesson'.

'Education needs to get out of the way. We are in the age of technology and now there are mobile devices in every age group. In this case, including technology in education will enable us to learn more. I had the opportunity to reinforce what I learned in a fun way with gamification applications'.

'It increases my interest in the course. With gamification applications, my motivation increased and there were questions that I could not answer because of my hesitation in the lesson. My self-confidence increased with gamification applications'.

Table 2. What do you think are the advantages of gamified environments?

Theme	F
Interest in the lesson	31
Different teaching techniques	22
Fun content	12
Permanent learning	10
Instant feedback	10
Reinforcement	10

3.3 What do you think are the disadvantages of gamified environments?

Considering the findings of the disadvantages of gamified educational environments applied to university students, most students mentioned the difficulty of its applicability in crowded classrooms. Likewise, in case of insufficient information, disadvantages may occur. Ten students stated that a solution could not be provided when they could have hardware problems. There were eight students who stated that failing in the tools, tests and applications applied in gamified environments reduces their motivation.

Opinions of some of the university students are as follows:

'The applications we use in gamified environments can be difficult to implement in crowded classrooms'.

'Gamified applications are very nice and enjoyable, but when the teacher's knowledge of using these programmes or the students' knowledge is missing, problems arise in their applicability'.

'There were times when I marked the wrong question I knew. I marked wrong for quick reply. Then I got mad at myself'.

Table 3. What do you think are the disadvantages of gamified environments?

Theme	F
Difficulty applying in crowded classrooms	35
Lack of information	12
Hardware problems	10
Failure reduces motivation	8

3.4 What are your views on the use of gamified environments in training?

When the views of the students on the educational processes of gamified educational tools are examined, there were 25 students who stated that gamified education increased their interest in the lessons. There were 22 students who stated that it provides learning convenience. There were 10 students who say that they provide the opportunity to learn in competition. Eight students stated that they work harder for the success of the group in group activities and that they create learning environments in cooperation with their friends.

Some of the views on students' gamified educational environments are as follows:

'My interest in the course has definitely increased. It has positively affected the motivation of my friends and me. We look forward to the class coming every week'.

'My communication with my friends has definitely increased a lot. Gamification method increases success in both individual and group activities and requires cooperation. I worked harder for my group to be the first in group activities. There are many things that I learned from my friends'.

'It certainly facilitates learning. I can say that for all the programmes we have used in gamification, they reinforced my learning and allowed me to see the missing parts. In this way, I had the opportunity to work again on the issues that I was missing and made mistakes and completed my deficiencies'.

Table 4. What are your views on the use of gamified environments in training?

Theme	F
Increasing interest in the lesson	25
Ease of learning	22
Learning in competition	10
Learning to cooperate with my friends	8

4 Conclusion, discussion and suggestions

In this research, a gamification class was applied to 62 students studying at the education faculty of the university institution. The gamified training process lasted 4 weeks and four different gamification programmes were used. These programmes are Kahoot, ClassDojo, Socrative and Classcraft. It has been determined that students preferred Kahoot the most among these gamification programmes. There were 30 students who preferred the Kahoot application, 12 students who chose the ClassDojo application and 10 students who chose the Socrative and Classcraft applications each. From the findings of this research, it can be said that the Kahoot programme is the most preferred programme for students. The results obtained from this study show similarities with the results obtained from other studies. In the study conducted by Bicen and Kocakoyun [42], the special education department teacher candidates in the university preferred Kahoot first in gamification applications. University students stated that they preferred ClassDojo, Classcraft and Socrative among gamification applications after Kahoot. Based on the research studies, it can be said that Kahoot will be an application programme that will integrate education and gamification applications to teach the future.

When the results of university students' inferences about the benefits of gamification are examined, it can be concluded that gamification has a great advantage because it increases the interest in the course. Likewise, gamification applications allow everyone to learn as they provide the opportunity to offer different learning methods. Another important aspect of gamification is that it provides continuous learning. The instant feedback feature also contributes to the learning of people. According to the results of the students regarding the benefits of gamification, it can be said that they believe that gamification has many benefits. With regard to the gamification method in the literature, there are many studies that conclude that it has a positive impact on students' academic performance and learning [40] [41]. Bolat, Simsek and Ülker [44] argue that gamification has a positive effect on academic performance retention rates, indicating that this does not affect the application layer. In open-ended answers, students were asked before the lesson. It is seen that they expressed the benefits such as preparation for the course, participation in the course and course repetition. Yıldırım [20], on the other hand, when the findings of the research examining the effect of gamification on student achievement and attitudes towards the course in higher education were examined, determined that gamification practices had a positive effect on students' learning success and perceptions towards the course.

Considering the results regarding the disadvantages of the gamified educational environments of the education faculty students studying at the university, they did not

state too many disadvantages. Most students mentioned the difficulty of its applicability in crowded classrooms. Likewise, disadvantages may arise in the case of insufficient information. Ten students stated that a solution could not be provided in case they may experience hardware problems. There were eight students who stated that being unsuccessful in tools, tests and applications applied in gamified environments reduced their motivation. Findings on the disadvantages of students' gamification education are supported by other studies. Hebebcı and Usta [47] mentioned that gamification can cause some negative effects. In their research, Yapıcı and Karakoyun [45] found that some teacher candidates who gave wrong answers after the gamification application were demoralising. As a matter of fact, the resulting competition can cause communication problems among students. Technical problems and situations that are not provided by classroom control from time to time can be stated as disadvantages. Plump and LaRosa [46] state that providing the necessary infrastructure in the gamification process can eliminate these disadvantages.

When the results of the gamified educational tools of the students regarding their educational processes are examined, its importance in education emerges. It showed positive attitudes in general, stating that gamified education increased their interest in the lessons. Students stated ease of learning. It has been concluded that the competition provides an opportunity to learn. Students stated that they work harder for the success of the group in group activities and create learning environments in cooperation with their friends. It is of great importance to include gamified educational environments in educational processes. The result obtained from this research finding is supported by other studies. Johnson, Becker, Estrada and Freeman [48] determined the new technologies in education and training. In the 2015 Horizon Report, which sheds light on the use of gamification, both K–12 an increasingly attractive and high potential in higher education emphasised that it has become a topic with gamification leadership where players compete with each other and are placed according to their score tables. Moreover, the players, like sending gifts to each other by working collaboratively, belong to the game. By transferring the items to classroom or online learning environments, learners are forced to learn, and learning drawn into their environment. The positive aspects that can be said about the reasons why gamification is preferred in learning environments are generally focused on 'motivating, increasing participation' and 'providing interaction between students' [49].

5 References

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